US00RE41541E

(19) **United States**

(12) **Reissued Patent**

Soini et al.

(10) **Patent Number: US RE41,541 E**

(45) **Date of Reissued Patent: *Aug. 17, 2010**

(54) **MULTI-SERVICE MOBILE STATION**

(75) Inventors: **Veli-Matti Soini**, Toijala (FI); **Markku Rautiola**, Tampere (FI); **Jarmo J. Makela**, Tampere (FI); **Toni Sormunen**, Saaksjarvi (FI); **Harri Halminen**, Kangasala (FI); **Jari Toivanen**, Tampere (FI)

(73) Assignee: **Nokia Corporation**, Espoo (FI)

(*) Notice: This patent is subject to a terminal disclaimer.

(21) Appl. No.: **11/134,470**

(22) Filed: **May 20, 2005**

Related U.S. Patent Documents

Reissue of:

(64) Patent No.: **6,611,693**
Issued: **Aug. 26, 2003**
Appl. No.: **10/211,116**
Filed: **Aug. 1, 2002**

U.S. Applications:

(62) Division of application No. 08/802,715, filed on Feb. 19, 1997, now Pat. No. 6,445,932.

(30) **Foreign Application Priority Data**

Feb. 23, 1996 (FI) 960859

(51) **Int. Cl.**
H04M 1/00 (2006.01)
H04M 1/725; H04M 1/72; H04M 1/73; H04Q 7/32

(52) **U.S. Cl.** **455/556.1**; 455/566; 455/567; 455/575.1

(58) **Field of Classification Search** 455/556.1, 455/556.2, 566, 575.1, 575.3
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,020,090	A	5/1991	Morris	379/58
5,049,862	A	9/1991	Dao et al.	340/706
5,128,981	A	7/1992	Tsukamoto et al.	379/58

(Continued)

FOREIGN PATENT DOCUMENTS

DE	4108169	A1	9/1991

(Continued)

OTHER PUBLICATIONS

IBM Technical Disclosure Bulletin, "Personal Communicator Configurations", Jun. 1994, 3 pages.
JP 8237138–A English language abstract, Kokusai Denki KK, 2 pages, 1996.

Primary Examiner—Lee Nguyen
(74) *Attorney, Agent, or Firm*—Harrington & Smith

(57) **ABSTRACT**

A multi-service mobile station according to the invention comprises means (**42**) for connecting the device by radio to telecommunication network in order to utilize typical mobile station services, such as speech and data services. Additionally, the multi-service mobile station provides means (**41**, **40**, **47**) for using various information processing services (P**1**, P**2**), such as telefax service and electronic mail service. When using information processing services, the information processed by the user is automatically saved in the memory means (**40**, **47**) of the multi-service mobile station when a certain criterium is met. The criteria are e.g. shifting from one service to another, going over to current saving mode, or, in a two-section multi-service terminal device, folding the device together. It is also characteristic of the multi-service mobile station according to the invention, that the automatic data storing and current saving methods operate in a close-knit cooperation with operating system, resulting in the longest possible battery operating time for the multi-service mobile station.

29 Claims, 3 Drawing Sheets